

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Division - Watershed Management Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: HOWE RESERVOIR	Lake Area (ha):	104.33
Town: DUBLIN	Maximum depth (m):	4.7
County: Cheshire	Mean depth (m):	2.5
River Basin: Connecticut	Volume (m ³):	2585500
Latitude: 42°55'35" N	Relative depth:	0.4
Longitude: 72°07'45" W	Shore configuration:	2.46
Elevation (ft): 1274	Areal water load (m/yr):	14.22
Shore length (m): 8900	Flushing rate (yr ⁻¹):	5.70
Watershed area (ha): 2667.7	P retention coeff.:	0.51
% watershed ponded: 4.5	Lake type:	artificial

BIOLOGICAL:

15 February 2000

6 July 1999

DOM. PHYTOPLANKTON (% TOTAL)	#1	NO WINTER PLANKTON	ASTERIONELLA 20%
	#2	ANALYZED	DINOBYRON 17%
	#3		MELOSIRA 12%
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			5.70
DOM. ZOOPLANKTON (% TOTAL)	#1		POLYARTHRA 46%
	#2		KELICOTTIA 20%
	#3		
ROTIFERS/LITER			291
MICROCRUSTACEA/LITER			73
ZOOPLANKTON ABUNDANCE (#/L)			425
VASCULAR PLANT ABUNDANCE			Scat/Common
SECCHI DISK TRANSPARENCY (m)			2.7
BOTTOM DISSOLVED OXYGEN (mg/L)		9.7	6.3
BACTERIA (E. coli, #/100 ml)	#1		
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 2.5
Hypolimnion volume (m³) : None
Anoxic volume (m³) : None

CHEMICAL:

Lake: HOWE RESERVOIR

Town: DUBLIN

	15 February 2000		6 July 1999		
DEPTH (m)	1.0		1.5	3.0	4.0
pH (units)	5.6		6.5	6.0	5.8
A.N.C. (Alkalinity)	2.3		2.2	2.4	3.3
NITRATE NITROGEN	0.29		< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	< 0.10		0.20	0.40	0.37
TOTAL PHOSPHORUS	0.007		0.008	0.010	0.014
CONDUCTIVITY (μ mhos/cm)	61.2		44.0	44.5	45.1
APPARENT COLOR (cpu)	27		27	34	65
MAGNESIUM			0.56		
CALCIUM			1.7		
SODIUM			5.1		
POTASSIUM			0.50		
CHLORIDE	12		7		7
SULFATE	5		4		4
TN : TP			25		26
CALCITE SATURATION INDEX			4.2		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1999

D.O. S.D. PLANT CHL TOTAL CLASS

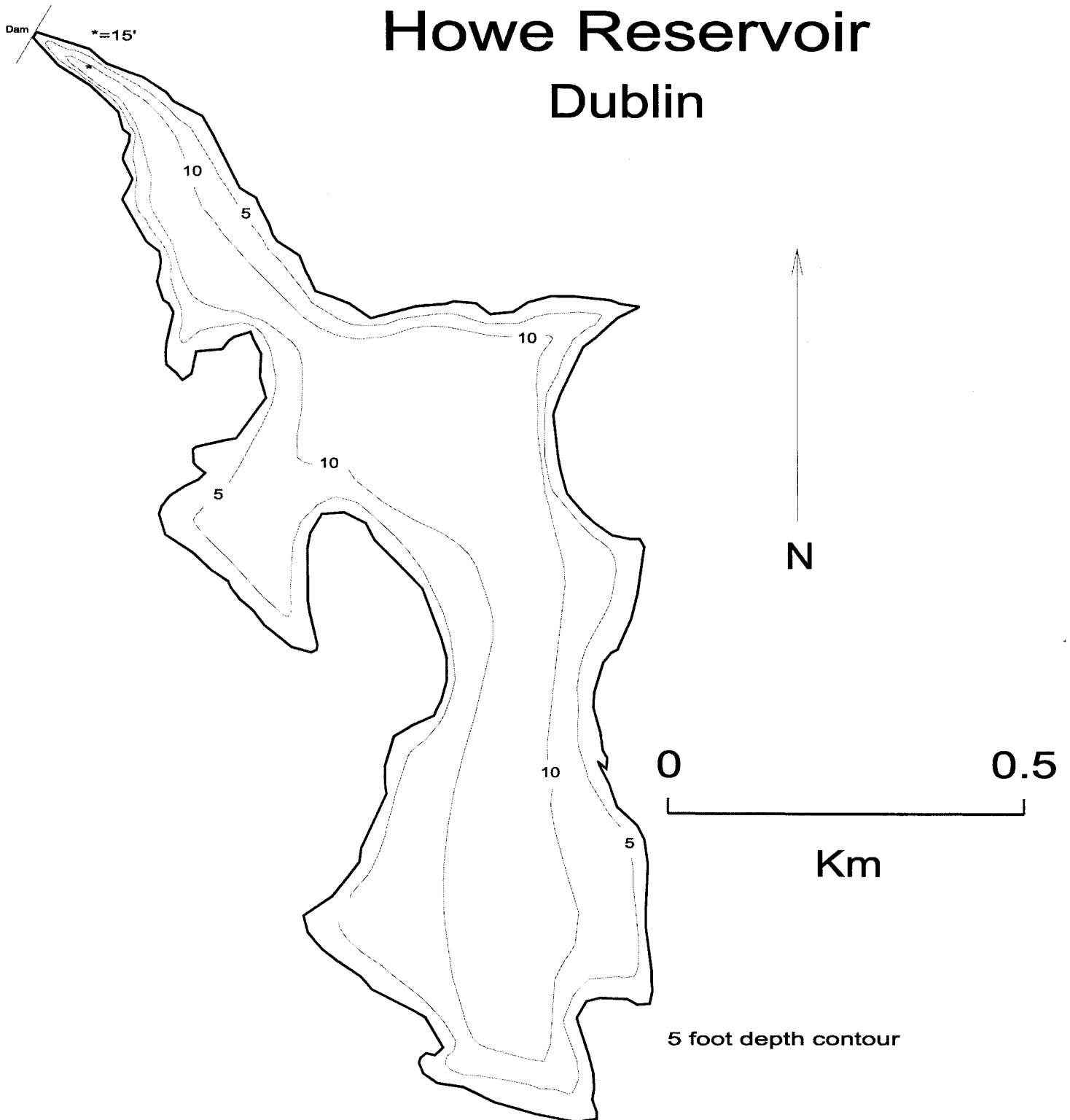
**	3	2	1	6	Meso.
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COMMENTS:

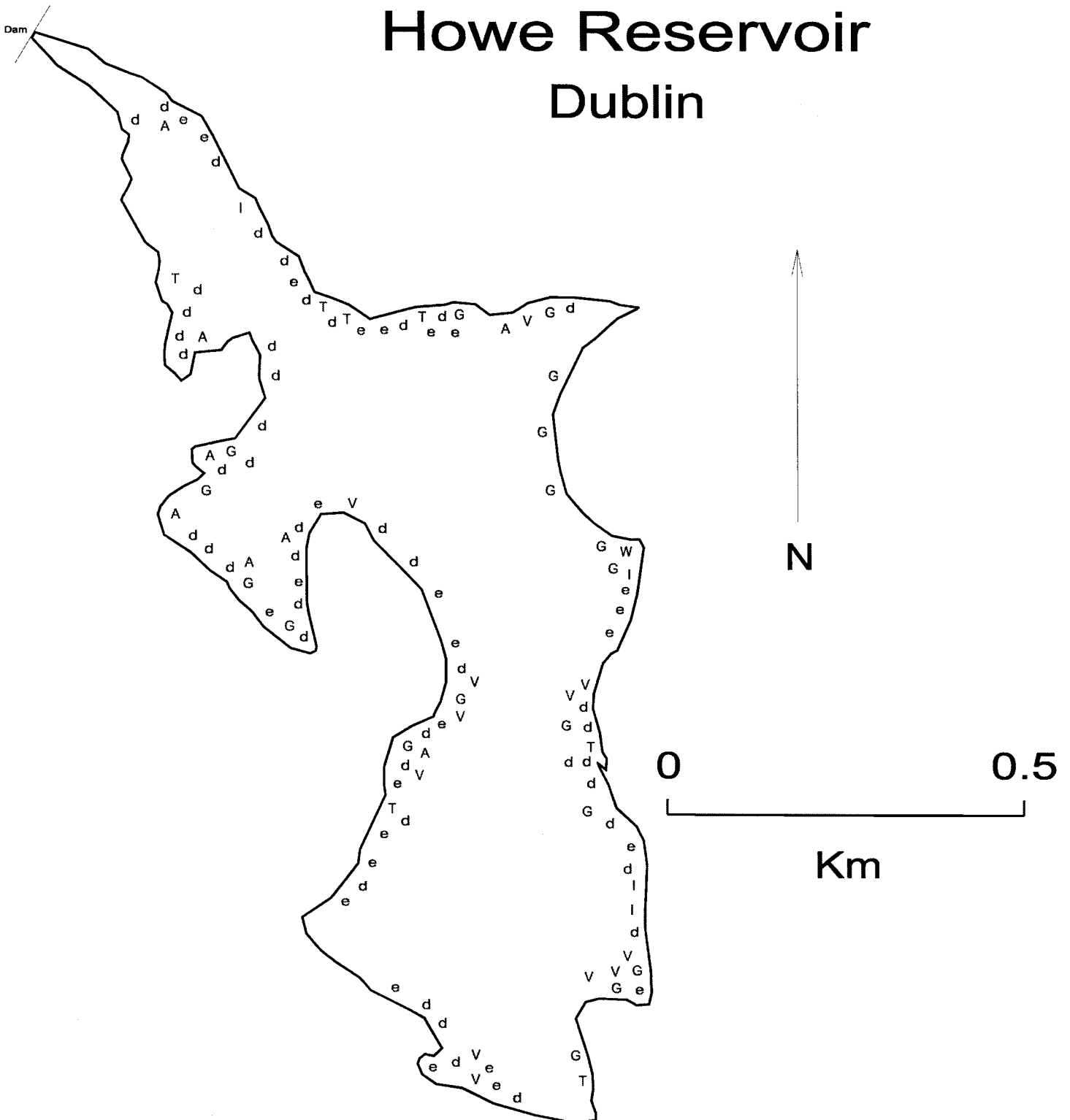
1. Howe Reservoir was previously surveyed and classified in 1986. It was listed as eutrophic at that time, primarily because of a dissolved oxygen depletion in the bottom waters at the deep spot that was not observed in 1999. Other water quality parameters did not change greatly, although the water was less tea-colored in 1999.
2. Howe Reservoir is a recent (2000) participant in VLAP but with limited sampling.

Howe Reservoir

Dublin



Dam



[illegible]